SCIENCE & GOVERNMENT REPORT

20th Year of Publication

The Independent Bulletin of Science Policy

Volume XX, No. 4 | P. O. Box 6226A, Washington, D. C. 20015 | © March 1, 1990

Elected to Engineering Academy

Bush Aide is Suddenly a Heck of an Engineer

Though substantial, the engineering accomplishments of John H. Sununu eluded the notice of the National Academy of Engineering (NAE) during his teaching, research, and industrial careers, and even through three terms as Governor of New Hampshire, a post he left in 1989 to become Chief of Staff to President Bush.

However, a sense of *realpolitik* is not lacking among the chieftains of the NAE, which has not achieved the prestige and authority envisaged at its founding 25 years ago. Therefore, the Washington research-policy grapevine chirped with light-hearted cynicism last month when the President's political doorkeeper was listed among 80 engineers newly elected to the NAE. That brings the NAE membership to 1535, a tiny sliver presumably comprising the very best among the nation's 2.3 million engineers.

A public announcement of Sununu's admission reads: "For exceptionally significant creativity in energy systems development, in engineering education, and in integration of technological advances with public policy." The NAE says the average age of the newly elected is 63. Sununu is 50.

Indirect Cost Rates for Top 135—P. 6
NIH Appropriations Hearing—P. 3

The reward was immediate for the NAE, which is an independent subsidiary of the far older and more prestigious National Academy of Sciences: George Bush himself showed up at the NAE's 25th anniversary celebration, a black-tie dinner for 200 at the State Department. On the capital's power meters, the Presidential presence registers like nothing else. For the occasion, the White House speech shop furnished Bush with several worn out jokes about engineering, including the one about the engineer who professionally repairs the guillotine that he knows awaits him. But any presidential remarks draw raves on the ceremonial circuit.

The Sununu election was privately regarded with some disdain within the staff of the National Academy of Sciences, which holds the 127-year Congressional charter under which both academies and the Institute of Medicine exist. The NAE initially came aboard as a subordinate part of the NAS in response to pleas to keep science and engineering close, along with offers of housekeeping services within an ongoing organization.

In the early years, some of the engineering leaders felt neglected and talked of building a contingency fund for departure. They eventually cooled down, and though it's not a love match, the two academies have worked out a living

(Continued on Page 2)

"Whistle-Blower" Pleads Guilty

Ex-Head of Malaria Research At AID Due for Sentencing

After two years of depicting himself as a whistle-blower persecuted by a vengeful bureaucracy, James M. Erickson, former head of malaria-vaccine research at the Agency for International Development (AID), has pleaded guilty to three felony counts arising from his management of the research program.

The counts charge him with a concealed financial interest in an AID subcontractor; receiving a $20,380 "gratuity" from another firm doing business with AID, and failure to

(Continued on Page 2)

In Brief

Battered by seamy allegations about Robert Gallo, NIH is aiming for an inquiry beyond reproach on its star researcher's role in identifying the AIDS virus. Departing from its customary procedures in misconduct investigations, NIH has asked the Institute of Medicine to draw up a list from which NIH will select a 6-7 member panel. The inquiry was touched off by a damning investigative report in the *Chicago Tribune* followed by Rep. John Dingell's demands for an explanation (SGR, January 15). Rumors that Gallo stole the AIDS identification from a French competitor have circulated for years.

Among deficit-reduction options listed by the Congressional Budget Office (CBO): A two-year suspension of construction of the Superconducting Super Collider, pending progress on the SSC's troublesome magnet design. The delay, saving $100 million next year and $2.1 billion over five years, would advance startup to 1993, when, according to the Gramm-Rudman schedule, the deficit will be down to zero. The SSC item is in Reducing the Deficit: Spending and Revenue Options *(471 pp., no charge); order from CBO, Publications, House of Rep. Annex II, R-413, 2 and D Sts. SW, Washington, DC 20515; tel. 202/226-2809*

"Cold fusion" produced little or no heat, but it generated enough paper, electronic bulletins, and video tape to inspire a major archival collection, to be located at Cornell University, with support from NSF. The collection is being assembled by Thomas F. Gieryn, Associate Professor of Sociology at Indiana University, and Bruce V. Lewenstein, Assistant Professor of Communications at Cornell.

Sign of the times: A new prize on the roster of awards at the National Academy of Sciences—$20,000 for the Industrial Application of Science, established by IBM in honor of Ralph Gomory, former IBM Senior VP for Science. Winner: Carl Djerassi, Professor of Chemistry at Stanford.

. . . Will Science Adviser Bromley Make the Grade?

(Continued from Page 1)
arrangement. One difference, however, remains unbridgeable: The Academy of Sciences, which keys its membership to accomplishments in basic research, consists largely of professionally recognized academic scientists (not all the best are in, but of those who are in, most are among the best).

For the Academy of Engineering, the charter criteria for election are "important contributions to engineering theory or practice, including significant contributions to the literature of engineering;" and "demonstration of unusual accomplishments in the pioneering of new and developing fields of technology." But, as it turns out, many of those admitted are senior corporate executives with little or nothing to show under any of those headings.

The Academy of Sciences has so far abstained from the practice of electing the neglected after they attain political prominence. From the Eisenhower through the Ford administrations, all chiefs of the White House Science Office were members of the NAS at the time of their appointment. The first non-member of the NAS to hold the White House job was Ronald Reagan's Science Adviser, George A. Keyworth II, a Los Alamos physicist who came to Washington disdaining the NAS as a single-minded lobby for university science—which is more or less the case.

Keyworth's successor at the White House Science Office, William Graham, a right-wing, nuclear-hardliner, outdid the early Keyworth in his dislike of the Academy, and the NAS staff reciprocated the disdain, leading to the worst two years ever in the long history of ties between the NAS and the White House. Academy purists could argue, however, that Keyworth and Graham were pretty thin on the publications side, and that's all that counts in electing members.

Now, however, comes a different story in the reign of Bush's Science Adviser, D. Allan Bromley, a scientifically distinguished physicist who founded and directed the Wright Nuclear Structure Laboratory at Yale. By all the customary criteria of important scientific publications, administrative accomplishment, and service logged with Washington policy committees, Bromley was long ago a shoo-in for Academy membership. But it has eluded him, and associates say he's not pleased about that. He has, however, gone to considerable lengths to restore good working relations between his office and the academy complex.

Rejection for membership does not come with a public certificate of explanation. But there are those who say that a blackball arising from an old feud is the explanation. There's no way of confirming that, but Bromley's absence from the Academy rolls is no credit to that institution, where researchers of considerably less stature are not in short supply.

Will the neglect be corrected in the forthcoming spring election to Academy of Sciences membership? That is a question of some lively interest now that the Academy of Engineering has certified John H. Sununu as one of America's most accomplished engineers.—DSG

Ex-Malaria Chief Accused AID Contractor of Misdeeds

(Continued from Page 1)
report $68,380 on his 1986 income tax return. Nine other counts were dropped as part of a plea-bargain agreement between Erickson and federal prosecutors. One of the dropped counts accused Erickson of sharing in kickbacks on the purchase of monkeys for malaria research. Sentencing is scheduled for April 6 in Federal District Court, Alexandria, Va. The charges carry maximum sentences totaling 10 years imprisonment and $750,000 in fines.

Up to February 1, when he entered pleas to the three counts, Erickson contended that he was the victim of retaliation by AID because he had found financial irregularities and other deficiencies in the performance of the prime contractor on the malaria project, the American Institute of Biological Sciences (AIBS), a Washington-based job shop for government-financed projects. Erickson assiduously courted the press and received sympathetic coverage in SGR and elsewhere (SGR June 15, 1988: "Turmoil in Malaria R&D Program Spurs Congressional Inquiry," and November 1, 1989: "AID Malaria Research Program Assailed in Report to Congress").

Erickson's case was repeatedly marked by elements of the bureaucratic bizarre, including banishment from AID on administrative leave with pay from 1987-89, during which he received three merit salary increases—apparently a routine matter at AID, even for those barred from the office, as was the case with Erickson. The enforced leave was initially based on accusations that he had harassed AIBS employes, including a manager there with whom he had a romantic relationship.

When Erickson, invariably combative up to the time of his guilty pleas, demanded that AID hold a formal hearing and identify the victim or victims of the alleged harassment, AID dropped the charge, but docked him one week's pay for

(Continued on Page 3)

© 1990, Science & Government Report, Inc.

Editor and Publisher
Daniel S. Greenberg

Associate Publisher
Wanda J. Reif

European Correspondent
Francois Seguier (Paris)

Circulation Manager
Glen D. Grant

Independently published by Science & Government Report, Inc., twice monthly, except once each in January, July, August, and September. Annual subscriptions: Institutions, $290.00 (two years, $495.00). Bulk and individual rates upon request. Editorial offices at 3736 Kanawha St. NW, Washington, DC 20015. Tel. (202) 244-4135. For subscription service: PO Box 6226A, Washington, DC 20015. Tel. 1-800-522-1970; in Washington, DC 785-5054. Reproduction without permission is prohibited. SGR is available on University Microfilms International. Claims for missing back issues will be filled without charge if made within six weeks of publication date. ISSN 0048-9581.

Still Director-less, NIH Opens Appropriations Quest

Congress's opening hearing on the fiscal 1991 budget for the National Institutes of Health, February 20 in the Senate, was a cheerless affair. The proceeding reflected Capitol Hill's general financial gloom and the delay since August, with no resolution in sight, in appointment of a new NIH Director. Spirits were not raised by the bored demeanor of the Chairman, Senator Tom Harkin (D-Iowa), in his second year as head of the Appropriations Subcommittee for NIH, and apparently still a bit vague on the basic workings of the great Bethesda complex.

With William Raub, the longtime NIH administrator who is serving as Acting Director, in the witness chair, Harkin expressed concern about the proposed budget increase for NIH, 4.7 percent. "I am sure Congress will want to remedy that shortcoming," he said—par for the course, since the White House comes in low in realistic anticipation of additions to Capitol Hill's favorite agency. Harkin then expressed puzzlement that even with a doubling of its budget since 1980, NIH is hardpressed to provide funds for more than a third of the applications it deems meritorious.

"I was especially pleased to see the slight turnaround in funding rate for new grants," the Senator said, referring to a recent small upturn. But, he added, "While I hope the Congress will do its part to help continue this trend by providing additional funding, NIH must do its part to assist. I think we need to slow the rate of increase in new grant applications." He did not suggest how NIH might accomplish that goal.

In a statement submitted for the record, Raub listed several major research achievements of the past year and touched briefly on a number of sensitive issues in biomedical politics. Among them, though not referred to explicitly, was regulation of conflict of interests among NIH grantees, on which tough rules drafted by NIH have been cancelled by its parent agency, the Department of Health and Human Services.

Describing NIH "as a leader among government agencies" in making its research findings available to industry, Raub added: "While we extend our efforts in technology transfer, we must ensure that our research goals are not unduly influenced by conflicts of interest affecting the

(Continued on Page 4)

. . . *Admits Taking "Gratuity" from AID Monkey Supply Firm*

(Continued from Page 2)

"conduct impacting on the efficiency of the service," a non-appealable charge.

Throughout the investigation, Erickson claimed that AIBS was the real villain and that AID was persecuting him to deflect attention from its tolerance of AIBS's misdeeds. An inquiry by the General Accounting Office (GAO), the investigative service for the Congress, was critical of Erickson, AIBS, and various other parties in the malaria program, which has spent over $100 million since 1966.

The GAO said it found "questionable costs billed to AID by AIBS and other [malaria-research] network members." The GAO also cited "Irregular reporting practices by AIBS," and charged that "AIBS mislabeled more than $553,000 spent for other project activities as subcontract expenses on its monthly vouchers to AID." Neither AID nor the Justice Department has disclosed any action concerning AIBS and the GAO findings.

Incurring large legal fees, Erickson filed suit against AIBS under the False Claims Act, which permits private citizens, including federal employes, to initiate federal prosecution for misuse of government funds, and to share in any recovery. The suit was dismissed "with prejudice" by the Federal District Court in Alexandria, but Erickson and his current attorney say the dismissal arose only from a technical error in filing the suit.

The charges to which Erickson pled guilty are linked to his financial interest in a firm called International Insect Research and Development-Guatemala (IIR&D), a subcontractor for KT&R Laboratories, St. Paul, Minnesota, which received a $736,801 AID contract in 1985. The count states that Erickson did not note on the financial statement required of federal employes that he had "a continuing financial interest" in the company. The count charges that from November 1985 through June 1987, KT&R paid $88,000, in monthly increments of $8000, to IIR&D, and that Erickson "made withdrawals" from the account into which the funds were deposited.

The indictment states that the $20,380 "gratuity" which he has admitted receiving came from a George Diaz and a company named Gerrick International, which Erickson engaged to supply monkeys for research. Diaz has also been indicted, but is said to be abroad and beyond the grasp of the Justice Department.

Since entering the guilty pleas, the usually buoyant and loquacious Erickson has been silent while undergoing a presentence investigation that the judge will consider in determining his punishment. One associate says that Erickson has been worn down by legal expenses and the recent breakup of his marriage. A legal source estimates that a full defense, including the cost of bringing in witnesses from abroad, would cost at least $200,000.

Meanwhile, AID's malaria-vaccine program, which has been racked by accusations of fiscal misdeeds by other members of the research network, is under review by the National Academy of Sciences under a $608,000 AID contract. Previous optimism about development of a vaccine has disappeared.—DSG.

. . . Queries About Process for Picking Head of NIH

(Continued from Page 3)

participants in research projects at awardee universities. We seek balanced solutions that will protect the integrity of the supported research without imposing unnecessary restrictions on this creative enterprise."

The management of these conflicts is crucial for the integrity of NIH, but neither Chairman Harkin nor those few other Senators who attended (mostly by drifting in and out) displayed interest in the issue.

After Raub had finished delivering an abbreviated version of his prepared statement, Harkin, with a staff member frequently whispering to him, asked if human genome research would move faster if more money were spent on developing technology for the program. Raub said the program was "balanced" between technology development and operations, and, besides, he said, genome research was inherently "labor intensive," and "you can't really speed it up too much." Harkin, appearing unpersuaded, said, "We need to know the best choices." Raub assured him that, in partnership with the Department of Energy, NIH was focusing "on the best mix of effort." Harkin indicated that he believed the project could move faster.

Turning to the issue on many minds, the long-vacant post of NIH Director, the Chairman asked Raub, "Do you know what the process used to be and how we can get this [appointment] out of the political role and get it back to the scientific community?"

Raub responded that the appointment originally was in the hands of the Secretary of the Department, but that early in the 1970s, it was legislated up to a Presidential appointment.

Harkin said, "I'd like to know more about that," adding, "Let's look at some of the Directors back in the '50s and '60s. How were they appointed?"

Raub said he didn't know whether there was "a uniform process at one time or another, but a conventional procedure—used even now, in the current approach—is a so-called search committee." He went on to explain that such a search committee existed, chaired by the Assistant Secretary for Health, James Mason, and that it had sent several names to the White House.

Raub then mentioned that another committee on the NIH Directorship had since been formed by HHS Secretary Louis W. Sullivan; its task, said Raub, is to "examine the position itself, looking at ways that it might be made more attractive to candidates, and otherwise ways that it might function more efficiently and effectively."

Harkin, appearing to receive this as fresh information, wanted to make certain that he understood the difference between the search panel and the panel on the structure of the Director's job.

"Are you on both panels?" he asked Raub, who's in the running for NIH Director, but, as a PhD, is handicapped for a post that has always been filled by MDs.

"Technically, I'm not on either panel," Raub said. "I have no relationship whatsoever to the search committee. I do serve as a staff resource for the Secretarially chartered committee that is looking at the empowerment of the position." Raub added that also serving as a "staff resource" for the committee was Anthony Fauci, Director of the Institute of Allergy and Infectious Diseases, who was seated nearby.

Harkin, after pausing to absorb this information, asked Fauci. "But you're not on the panel that makes recommendations?"

Fauci explained, "No, I'm, as Dr. Raub said, an adviser to the panel for making the job more attractive. But I'm not on the search committee that is looking at names and making recommendations through the Assistant Secretary to the Secretary, to the President. That's a separate search committee from the panel advising restructuring the job of the NIH Director." The committee expects to report by the latter part of March or early April, Fauci said.

Harkin then turned to the so-called litmus test—a required anti-abortion stance—that has repelled several candidates otherwise accepted as suitable by the White House. "There seems to be some test that proposed Directors have to go through. . . and whether or not they're for fetal-tissue research at NIH and associated agencies."

Discussion of that topic went no further, as Harkin abruptly switched the subject to the "Silver Spring monkeys," retrieved in pathetic physical condition from a suburban Washington laboratory where they had been used for experiments on spinal-cord injury. The care and fate of the animals has since become a *cause celebre* among animal-rights advocates, who have widely published heartrending photos of monkeys.

Harkin, however, expressed skepticism, saying that he had read that one of the frequently reproduced photos, showing a monkey in "a contorted position," was a "fake."

Raub replied that "there is substantial indication that the picture was staged." He added that NIH was attempting to set up an expert panel to determine care for the surviving animals. "NIH," he said, "has developed and shared with the 'other side' a set of questions that might be the framework for those experts. Progress has been slow," Raub continued. "The gulf that divides us is significant. We're dealing with organizations whose avowed commitment is to abolish animal experimentation. And there is little in the way of middle ground that we've been able to identify."

Harkin expressed support for experimental use of animals, with appropriate attention to their comfort.

The hearing turned to the use of fetal tissue, on which HHS has extended a ban initiated at the end of the Reagan administration. Harkin asked Raub to describe "what research opportunities are we missing" as a result.

"Strictly speaking," Raub responded, "there were two research projects affected by that moratorium. One was a

(Continued on Page 5)

. . . Raub Explains Ban on Fetal-Tissue Research

(Continued from Page 4)

project not yet begun, in our intramural program, that would have involved the transplantation of human fetal cells into the brains of Parkinson's disease patients. The other was a project funded by research grants, with a scientist at the University of Wisconsin, using human fetal cells in transplantation under the kidney capsule in the hopes of countering some of the effects of diabetes.

"Technically," Raub continued, "that ongoing grant project was not covered by the moratorium, but the scientist involved voluntarily stopped the work until the larger national debate could play out."

Asked by Harkin to account for the Wisconsin scientist's decision, Raub replied, "I believe it was in his recognition of the intensity of the national debate, the deep differences of opinion, and wanting to determine where that would come out before proceeding with his line of research."

Raub then explained a point that is not generally understood, that "the ban [on use of fetal tissue] does not apply in those few instances where human fetal tissue is used routinely in established treatment. There are some rare disorders," he said, "where that therapy is used, and the ban does not affect that. It is strictly [applicable only to] research. Moreover, the ban does not affect non-transplantation research use. NIH has about $7.5 million worth of ongoing research where human fetal tissue is used in laboratory studies, looking at the so-called growth factors, for example, that are active in early embryonic life, that not only play a role in growth and development, but increasingly are being linked with cancer and longterm with the aging process. That research continues," Raub said.

Harkin, looking puzzled, said to Raub, "So, you're saying that the moratorium does not apply to non-transplantation research projects. Is that correct?"

Raub answered, "Probably, the best way is to state it the other way, Senator. It's [applicable to] human fetal tissue derived from induced abortions used in research on transplantation into human subjects."

"So what would be the other use, then?" Harkin asked.

"Fetal tissue not used for transplantation might be used in a variety of laboratory studies, looking at, for example, the biochemistry of these cells," Raub explained, "and how they grow and divide and how they develop."

"So, when you talk about a moratorium on fetal-tissue research, that's not entirely correct," Harkin said. "It's just a moratorium on transplantation." The Senator continued, "I'll have to look at this more, because, if that's the case, I didn't understand that there was a problem with the transplantation research, as such, a problem of using the fetal tissue, as such. So, if it's used for something else, other kinds of research, then it seems to me that the original arguments for not using it don't hold."

Raub responded that the ban "was drawn as specifically as it was out of concern that, if there were to be greatly expanded use in the human clinical transplant arena, that it would create a new demand for abortion—and it was that concern about a change in the national scene with respect to abortion that caused the moratorium to be placed."

A staff member whispered to Harkin, who then said, "If it wasn't an induced abortion, you could still use it for transplantation."

Raub didn't respond, and Harkin then expressed concern that "NIH currently approves 95 percent of grant applications, and in 1982 it was 85 percent." The Senator wanted to know "why is this happening" and it is desirable?

Raub said the high level of approval "is a consequence of the increased competition, and that is, it is the hardier souls that are staying in the competition. Many of our grant applications are now renewal requests from individuals who had been unsuccessful previously and attempted to take the benefits of a critique and try again. We also believe there has been an upward shift in the mean quality of applications as the competition becomes more severe and as the impacts in our investments in both research and training pay off."

But, Raub pointed out, "We cannot discount the possibility that some of our review groups may be grading a little more easily than they might have in the past, recognizing that some approved and unfunded [applicants] might be able to get private funding, whereas someone labeled as 'disapproved' might, in fact, have a non-negotiable barrier in terms of seeking private funds."

Harkin replied, "Ninety-five percent seems to me very high."

And so the hearing continued. NIH will go through another round when its House Appropriations Subcommittee takes up the budget starting March 12. The Chairman there, Rep. William Natcher (D-Ky.) has lovingly presided over NIH affairs since 1979, in contrast to the counterpart Senate Subcommittee, which has had three chairman over the past six years, as well as a membership less stable than that in the House.

The Senate budget hearing for NIH was an exercise in puzzlement. The House version tends to be a cheerleading session.

Science Salaries Outpace Inflation

Salaries for scientists and engineers rose annually by five percent in 1988 and 1989, staying a touch ahead of inflation, according to the Commission on Professionals in Science and Technology, a Washington research organization.

The highest median salaries, $57,400, were reported for PhD scientists and engineers in industry. The lowest, $44,000, was for PhDs in teaching jobs. The report, *Salaries of Scientists, Engineers and Technicians* (14th edition, 230 pp., $50 prepaid), is available from: Commission on Professionals in Science and Technology, 1500 Mass. Ave. NW, Suite 831, Washington, DC 20005.

Indirect Cost Rates for "Top Dollar" Universities

Indirect, or overhead, cost payments—the funds institutions receive for providing a base for externally financed research—retain a place as one of the least comprehensible and irritating items in government-academic relations. Campus administrators feel the rates are too low, federal administrators think they're too high, and bench scientists gripe that the system absorbs money that belongs in the lab. At Stanford University, researchers have recently protested that high, and fast-rising, overhead rates will make them less attractive for federal grants. The indirect rates, calculated as a percentage of the sums that go directly to researchers, are periodically set by government auditors, mostly from the Department of Health and Human Services, a handful from the Office of Naval Research. Following are the rates currently in effect for on-campus research at the 145 so-called top-dollar universities, which receive about 90% of federal funds for academic research.

Albany Medical College	65.0	Purdue University	49.0	U. of Maryland (College Park)	46.0
Arizona State University	51.0	Rensselaer Polytechnic Inst.	58.5	U. Mass. Med. Cen. (Worcester)	65.0
Baylor College of Medicine	45.0	Rhode Island, University of	50.0	Univ. of Mass. (Amherst)	52.0
Boston University	73.0	Rice University	47.0	U. of Med., Dentistry, N. Jersey	65.5
Bowman Gray School of Med.	39.5	Rochester, University of	59.0	Univ. of Miami Medical School	54.0
Brandeis University	59.0	Rockefeller University	68.0	University of Michigan	59.0
California Inst. of Technology	58.0	Rutgers University	64.0	University of Minnesota	44.0
Carnegie-Mellon University	56.0	South Carolina, U. of (Medical)	42.0	University of Mississippi	44.0
Case Western Reserve Univ.	51.0	St. Louis University	44.0	Univ. of Missouri (Columbia)	38.0
Colorado State University	45.0	Stanford University	74.0	University of New Hampshire	58.0
Columbia University	74.1	SUNY (Albany)	52.1	U. of New Mex. Med. School	48.5
Cornell University	70.0	SUNY (Buffalo)	52.7	Univ. of N. Car. (Chapel Hill)	44.5
Dartmouth College	50.0	SUNY (Stony Brook)	52.4	University of North Dakota	42.5
Dayton, University of	57.1	SUNY Health Sci. (Brooklyn)	56.9	University of Oklahoma	45.0
Duke University	50.0	Temple University	61.0	University of Oregon	42.3
Emory University	52.0	Texas A&M University	43.0	U. of Oregon Health Sci. Center	43.0
Florida State University	48.0	Texas Tech University	41.0	Univ. of Pennsylvania	65.0
George Washington University	48.0	Thomas Jefferson University	61.0	Univ. of Pittsburgh	43.0
Georgetown University	59.0	Tufts University	67.0	Univ. of South Carolina	50.5
Georgia Institute of Technology	54.0	Tulane University Med. School	50.0	Univ. of Southern California	63.0
Harvard Medical School	77.0	University of Alabama (Birm.)	42.0	Univ. of Tennessee (Knoxville)	38.5
Harvard University	68.0	University of Arizona	48.4	Univ. of Tenn. Cent. Health Sci.	44.0
Hawaii, University of	44.0	Univ. of California (Berkeley)	49.0	Univ. of Texas Cancer Center	45.0
Howard University	78.0	Univ. of California (Davis)	41.2	U. of Tex. Health Sci. (Dallas)	45.0
Illinois, University (Chicago)	57.0	Univ. of California (Irvine)	47.5	U. of Tex. Health Sci. (Houston)	48.0
Illinois, University of (Urbana)	51.7	Univ. of Calif. (Los Angeles)	48.0	U. of Tex. Health Sci. (San Ant.)	45.0
Indiana University	49.0	University of Calif. (Riverside)	43.0	U. of Tex. Med. Br. (Galvest.)	44.0
Iowa State University	40.0	University of Calif. (San Diego)	49.0	University of Texas (Austin)	47.0
Johns Hopkins University	64.0	Univ. of Calif. (San Francisco)	38.5	University of Utah	47.5
Lehigh University	61.0	Univ. of Calif. (Santa Barbara)	45.0	U. Vermont. & State Ag. Coll.	52.6
Louisiana State University	45.0	University of Chicago	65.0	University of Virginia	52.0
Louisiana State U. Med. Center	39.0	University of Cincinnati	54.0	University of Washington	51.0
Mass. Institute of Technology	63.0	University of Colorado	41.8	Univ. of Wisconsin (Madison)	44.0
Michigan State University	45.0	U. of Colorado Health Sci. Cent.	45.0	U. Wisconsin, Med. College of	56.1
Mt. Sinai School of Medicine	62.5	University of Connecticut	60.0	University of Wyoming	39.0
New Mexico State University	58.4	U. Connecticut Health Sci. Cent.	60.1	Utah State University	37.0
New York University	51.0	University of Delaware	55.0	Vanderbilt University	61.0
New York Univ. Med. Center	63.5	University of Florida	45.0	Virginia Commonwealth Univ.	52.0
North Carolina State (Raleigh)	47.0	University of Georgia	46.5	Va. Poly. Inst. and State Univ.	49.0
Northwestern University	51.0	University of Houston	47.0	Washington State University	44.5
Ohio State University	45.0	University of Iowa	41.0	Washington University	60.0
Oklahoma State University	44.0	University of Kansas	45.0	Wayne State University	49.0
Oregon State University	37.0	Univ. of Kansas Medical Center	47.0	Woods Hole Oceanographic	31.3
Pennsylvania State University	44.4	University of Kentucky	49.0	Yale University	68.0
Penn State (Hershey Med. Cent.)	42.6	Univ. of Maryland (Baltimore)	52.0	Yeshiva University	71.0

More In Print: Space, 1991 R&D Budget, Mapping

(Continued from Page 8)

for its grantees—would have banned grantees' financial ties to companies whose products they evaluate for the government; it also contained other strict conflict-of-interest prohibitions that the Korn report deems needless or disruptive of fruitful academic-industrial collaboration.

Order from: Association of Academic Health Centers, 1400 16th St. NW, Suite 410, Washington, DC 20036; tel. 202/265-9600.

Affordable Spacecraft: Design and Launch Alternatives (GPO Stock No. 052-003-01174-3; 36 pp., $2.25), from the Congressional Office of Technology Assessment, addresses possibilities for reducing the cost of space operations. Among the choices: bigger weight-overrun margins to avoid delays when spacecraft burgeon beyond original designs; "fatsats" to avoid the high cost of paring weight; "lightsats" that would provide modest but adequate capabilities for payloads; "microspacecraft," incorporating miniaturized payloads to be lofted by exotic launch systems, such as electromagnetic launchers, cannon-guns, etc. The OTA report was produced under an advisory panel chaired by M. Granger Morgan, Head of the Department of Engineering and Public Policy, Carnegie-Mellon University. Included is a list of 21 OTA reports on civilian and military space technology published since 1981.

Order from: USGPO, Superintendent of Documents, Washington, DC 20401; tel. 202/783-3238.

World Resources Institute (WRI): Publications Catalog, 1990 (44 pp., no charge), lists scores of publications produced by WRI, a major environmental policy-research organization founded in 1982, with support from the John D. and Catherine T. MacArthur Foundation, and well-regarded in Washington policy circles as an independent, reliable source of environmental data and analysis.

Order from: World Resources Institute, Publications Dept., 1709 New York Ave. NW, Washington, DC 20006; tel. 202/638-6300.

NSF's Research Opportunities for Women Program (ROW) :An Assessment of the First Three Years (NSF 89-34, 14 pp., plus appendix, no charge), report by NSF's Program Evaluation Staff on experience from 1985-87 with a small program designed to bring more women into research. The evaluators score it a success, though they note that in site visits "Many women indicated that NSF disciplinary officers had given them mistaken information about ROW, were not aware of the program, or had steered them away from it." The program has since been scattered to various NSF directorates.

Order from: NSF, Forms and Publications Unit, Room 232, 1800 G St. NW, Washington, DC 20550; tel. 202/357-7668.

Research and Development Funding: FY 1991 (14 pp., no charge), a concise presentation, agency-by-agency, of the R&D budget proposed by the Bush Administration for the fiscal year that begins next October 1, along with figures for the current budget and last year's. Prepared by the Science Policy Research Division of the Congressional Research Service, this is a clear and useful scorecard as the various budget proposals wend their way through the appropriations process.

Order from: Science Policy Research Division, Congressional Research Service, Library of Congress, Madison Building, Washington, DC 20540; attn. Ms. Raap; tel. 202/707-7014.

Spatial Data Needs: The Future of the National Mapping Program (78 pp., no charge), from the National Academy of Sciences, a report commissioned by the US Geoiogical Survey, says that computerized systems are supplanting paper and analog maps, and urges the USGS National Mapping Division to expand its role in developing the National Digital Cartographic Data Base, and increase research in digital cartography, remote sensing and image processing, etc.

Order from: NAS, Board on Earth Sciences and Resources, 2101 Constitution Ave. NW, Washington, DC 20418; tel. 202/334-3349.

Job Changes & Appointments

Samuel O. Thier has been appointed to a second five-year term as President of the Institute of Medicine (IOM), an appendage of the National Academy of Sciences. At the Council on Competitiveness, ***Kent Hughes***, an economist with long service in Congressional staff positions, has been named President, and ***Dan Burton***, has moved from Council Vice President to Executive Vice President.

To Order or Renew

Science & Government Report
Northwest Station, Box 6226A
Washington, D.C. 20015

☐ Renew my subscription; ☐ Check enclosed
☐ Enter my subscription; ☐ Please Bill

Institutional subscribers: one year, $290.00 ☐; two years, $495.00 ☐

(Overseas airmail, $35.00 per year; overseas surface $15.00 per year additional.)

Name _____

Address _____

_____ Zip _____

Toll-Free Subscription Service: 1-800-522-1970; In Wash., D.C.: 785-5054

In Print: NIST, Europe '92, Conflict of Interest, Etc.

The publications listed are obtainable as indicated—not from SGR.

Technology for US Industry: A Review of National Institute of Standards and Technology (NIST) Support of Industry in Science, Engineering, and Technology Transfer (99 pp., no charge), report on what some hopefully regard as an embryonic version of a US Department of Technology (and/or Industry), NIST, the former National Bureau of Standards (NBS), rechristened two years ago by Congress, which added new industry-boosting responsibilities to the old NBS mandate only to find the Reagan-Bush administration stingy with funds out of fear of industrial policy in disguise. The report, by the NIST Visiting Committee on Advanced Technology, now chaired by Arden L. Bement, TRW Vice President for Science and Technology, speaks glowingly of NIST's collaboration with industry, and, in a section on "NIST in the Year 2000," prophesies that federal "civilian R&D policy will become more focused, perhaps with a single principle spokesperson such as DOD's role in military R&D." The report also contains a comparison of technology-transfer performance by NIST and Department of Energy laboratories (using data derived from a General Accounting Office report), with NIST crowned winner in patents per 1000 staff, royalty receipts, and licensing agreements.

Order from: NIST, Visiting Committee on Advanced Technology, Rm. A-525, Administration Bldg., Gaithersburg, Md. 20899; tel. 301/975-2158.

Science and Technology and the 1992 European Market Integration: Implications for R&D Intensive Industries (no charge), collective title for a series of papers assembled as background material for a symposium, March 5-6, organized by the Academy Industry Program of the National Academy of Sciences. Included are two detailed analyses prepared by the Congressional Research Service: "The Europe 1992 Plan: Science and Technology Issues," "European Community: 1992 Plan for Economic Integration," and a broad review of EEC science and technology programs by Patricia L. Zechman, of the NAS Office of International Programs.

Order from: NAS, Academy Industry Program, 2101 Constitution Ave. NW, Washington, DC 20418; tel. 202/334-2200.

Case Studies in Translating Health Research into Economic Development (51 pp., $7.50), from the Southern Regional Education Board, reports on programs for commercial exploitation of research at academic medical centers, concluding, among other points, that "administrators can promote research and technology transfer most effectively by providing special administrative units dedicated to helping faculty recognize the economic potential of their research and then to helping them realize that potential." Included are brief reviews of health-center tech-transfer programs at Baylor, Bowman Gray, Emory, Hampton Roads, U. of Alabama, East Carolina, U. of Kentucky, U. of Maryland, U. of Mississippi, U. of Texas (at Houston and San Antonio), and U. of Virginia.

Order from: Southern Regional Education Board, 592 10th St. NW, Atlanta, Ga. 30318-5790; tel. 404/875-9211.

Conflict of Interest in Academic Health Centers: Policy Paper #1 (62 pp. in typescript, printed version, $17, to be published March 7), an important policy statement from the 100-plus member American-Canadian Association of Academic Health Centers (AAHC), comes as a riposte to the strict conflict-of-interest draft regulations that the Department of Health and Human Services recently canceled under fire from scientific societies and academic research representatives (SGR, January 15 "Lobbyists Squelch NIH Conflict-of-Interest Guides.") The proposed AAHC guide, by a group chaired by David Korn, Dean, Stanford Medical Center, stresses disclosure and local governance as safeguards against abuse of scientific and public trust. The deposed HHS rules—written by NIH and mainly intended

(Continued on Page 7)

Science & Government Report
Northwest Station
Box 6226A
Washington, D.C. 20015

Second-Class Postage Paid
At Washington, D. C.

UNIVERSITY MICROFILMS INC.
SERIALS ACQUISITIONS
300 N. ZEEB RD.
ANN ARBOR, MI 48106